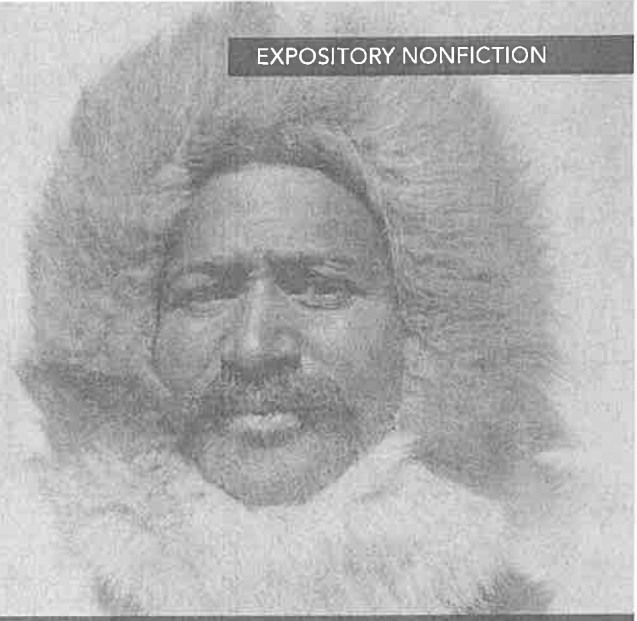


The Legacy of Arctic Explorer Matthew Henson

James Mills



About the Author



James Mills says “Me? I’ve got nothing but questions.” He has spent more than 20 years as a freelance journalist and radio producer trying to answer those questions. In his written and spoken work, Mills explores outdoor recreation (his experiences include mountaineering, rock climbing, backcountry skiing, and kayaking), the environment, and sustainable living. He lives in Madison, Wisconsin, with his wife and two dogs.

SCAN FOR
MULTIMEDIA



BACKGROUND

Earth spins on its axis, like a wheel spins on a hub. The ends of the axis are the most northern and most southern points on the planet: the North Pole and the South Pole. The North Pole lies on the ice cap that floats on the Arctic Ocean. The ice cap is about 6–10 feet thick at the Pole, while the water beneath it is about 13,000 feet deep.

1 In 1909 a team of six men on dog sledges made their way to a single point at the center of vast Arctic wilderness. It was a block of ice 413 nautical miles off the coast of Greenland believed to be the North Pole. There were many who refuted the events that led up to the day, April 6th, when an American flag was planted there. But in the years that followed an irrefutable truth would be revealed. The first person to stand on top of the world was a black man named Henson.

2 When Commander Robert Edwin Peary set out on the expedition his company included 24 men, 19 sledges, and 133 dogs. After months of travel across an immense field of ice from the edge of Cape Sheridan on Ellesmere Island, as planned, one by one members of the party began turning back. So there were only a handful of men who could substantiate the claim. When the first

NOTES

human footprints were pressed into the snow at the most northern point on the planet, all that remained of the original corps were Peary, 40 dogs, four native Inuit¹ hunters and an African-American man who would be forgotten by history for almost half a century.

- 3 Matthew Alexander Henson was born on August 8, 1866, to a family of freeborn sharecroppers in Nanjemoy, Maryland. It was one year after emancipation and the end of the Civil War. An African-American of the first generation to roam the world after the abolition of slavery, Henson led a singular life of exploration and discovery that would usher in the modern era of adventure that continues now through the 21st century.
- 4 Orphaned at a very young age, Henson made his own way in life with uncommon courage and tenacity. When he was only 12, he signed on as a cabin boy aboard a three-masted sailing ship called the *Katie Hines*. For the next six years under the mentorship of a Captain Childs, Henson received an education, learned a variety of technical skills, became a competent sailor, and traveled around the world visiting the then Orient, North Africa, and the Black Sea.
- 5 Captain Childs died in 1887. Upon his passing, Henson left the *Katie Hines* to take a job as a shop clerk for a furrier in Washington, D.C. Though his time at sea as a sailor was a thing of the past, Henson was still very interested in a life of travel and adventure. So it was no small quirk² of fate when a naval officer entered the shop one day to sell a collection of seal and walrus pelts that had just arrived from an expedition to Greenland. Impressed with Henson's experience and enthusiasm to see more of the world, Robert Peary hired him almost immediately as his personal assistant and invited him to take part in his next assignment.
- 6 Serving in the Navy Corps of Civil Engineers, Peary was tasked to map and explore the jungles of Nicaragua in the hopes of creating a canal to connect the Atlantic Ocean with the Pacific. Henson and Peary spent the next two years traveling together through the rainforests of Central America, a journey that would cement their friendship and bind their destinies together for the rest of their lives.
- 7 When they returned from Nicaragua, Peary helped Henson to get a job working as a messenger at the League Island Naval Yard in Philadelphia. On leave from the Navy to do more exploring in Greenland, Peary once again invited Henson to join his party. In 1891 the two companions began an 18-year partnership of Arctic exploration that included the complete mapping of the Greenland ice cap.

1. **Inuit** (IHN yu iht) North American Indian people sometimes known as Eskimo.

2. **quirk** (kwurk) *n.* peculiar trait.

- 8 Together Henson and Peary discovered the great island's northernmost terminus.³ And in two expeditions in 1896 and 1897 they recovered three enormous meteor fragments that they sold to the American Museum of Natural History in New York for \$40,000. The largest piece called the Cape York meteorite is also known by its Inuit name Ahnighito, which means the Tent. The massive iron rock weighs 31 metric tons, is the third largest intact meteor ever discovered, and the heaviest ever transported by human beings. The funds Peary and Henson acquired through these two ventures would go to support other expeditions over the next ten years.
- 9 Although Peary was the public face of their partnership, Henson was the front man in the field. With his skills as a carpenter and craftsman, Henson personally built and maintained all of the sledges used on their expeditions. He was fluent in the Inuit language and established a rapport⁴ with the native people of the region. He was known by all he encountered as "Matthew the Kind One." Henson learned the methods the Inuit used to survive and travel through the incredibly hostile landscape of the Arctic. "He was more of an Eskimo than some of them." Peary once said.
- 10 Henson was a very capable hunter, fisherman, and dog handler. And it was he who trained even the most experienced of Peary's recruits on each of the eight attempts they made to reach the North Pole.
- 11 It's fair to suggest then that much of the success in their expeditions was due to Henson's expertise. Though Peary repeatedly failed to reach his goal he managed to return safely time and time again having progressed a little further with every trip. In 1906 with the support of President Theodore Roosevelt, Peary and Henson managed to get within 174 miles of the North Pole by ship using a state-of-the-art⁵ ice breaker. On the three-masted steam-powered schooner called the *Roosevelt*, Peary and Henson made it closer to the pole than on any expedition to date. "When my observations were taken," Peary wrote in his journal, "they showed that we had reached 87°6' north latitude, and had at last beaten the record, for which I thanked God."
- 12 Two years later Peary and Henson would make their eighth and final attempt to reach the North Pole. Whether they succeeded or not both men, now in their 40s, could feel the strain of their long careers and decided this would be their last voyage together. Once again aboard the *Roosevelt*, a hand-picked team sailed from New York Harbor on July 6, 1908. Joining the party was Dr. John W.

3. **terminus** (TUR muh nuhs) n. end point.

4. **rapport** (ra PAWR) n. good relationship.

5. **state-of-the-art** best example of its kind at the time.

Goodsell, Donald B. MacMillan, Ross G. Marvin, George Borup and Robert Bartlett, the ship's captain. In a now classic system of caches⁶ the plan was to ferry and deposit loads of gear and food along the way with each successive team of dog mushers returning to the ship that was iced into port at Ellsemere Island. A smaller team of two Americans and four Inuit companions would make the final push to their objective. Peary and Henson were the most likely choices to lead the Pole team.

- 13 "With years of experience equal to that of Peary himself, [Henson] was indispensable," MacMillan would recall later.
- 14 And even Peary agreed that the expedition would never be completed without his trusted friend. "Henson must go all the way," he said as they planned the trip months earlier. "I can't make it there without him."
- 15 The group arrived at their starting point at Cape Sheridan on September 5, 1908. There they spent the long Arctic winter storing supplies of meat that included musk-ox, deer, and rabbit. Several of the Inuit men brought along their wives and children who set about the task of creating all the clothing and perishable supplies the expedition would need. In February, Peary led the party by sledge to Cape Columbia, where out on the ice he established a forward base camp. The expedition began in earnest as Henson led the first group of sledges toward the pole on March 1, 1909. And for the next five weeks the teams raced toward their goal.
- 16 Along the way, in addition to temperatures that fell to 65 degrees below zero, they encountered the frequent hazards of cracking and drifting ice that formed patches of open water called leads. But the group made steady progress as each of the support teams deposited their supply caches and turned back the way they came. McMillan led the first team back with Dr. Goodsell. They were followed days later by Borup, then Marvin. Bartlett was the last to return to the ship. Once he arrived the captain of the *Roosevelt* readied the ship for the Pole Team's safe return.
- 17 In his account of the adventure, *A Negro at the North Pole*, published in 1912, Henson made a detailed summary of the five-day march. He, Peary, and Inuits Ooqueah, Ootah, Egingwah, and Seegloo drove the five remaining dog sledges at a breakneck pace day after day for stretches that lasted 12 to 14 hours. Moving quickly to avoid the possibility of a massive lead opening up behind them and blocking their way back home they traveled more than 170 miles. In a series of hard pushes they made their way navigating by sextant⁷ and dead-reckoning⁸ until finally on

6. **caches** (KASH ihz) *n.* secure storage places.

7. **sextant** (SEHKS tuhnt) *n.* instrument used to determine position by measuring angles of the stars.

8. **dead-reckoning** determining position using speed and direction from a known previous position.

April 6th, as conditions on the trail ahead seemed to improve, Henson reported in his account that he felt certain their objective was within reach.

18 “We crawled out of our igloos and found a dense mist hanging over everything,” he wrote. “Only at intervals, when the sun’s rays managed to penetrate the mist, could we catch even a glimpse of the sky. Estimating the distance that we had come during the last four days, we figured that, unless something unusual happened to us during the course of this day, we should be at the Pole before its close.”

19 According to his own recollection Henson was in the lead sledge through much of the day scouting the trail ahead.

20 “The Commander, who was about fifty yards behind, called out to me and said we would go into camp,” wrote Henson. “We were in good spirits, and none of us were cold. So we went to work and promptly built our igloos, fed our dogs and had dinner. The sun being obscured by the mist, it was impossible to make observations and tell whether or not we had actually reached the Pole. The only thing we could do was to crawl into our igloos and go to sleep.”

21 The following day when the mist had cleared, Peary took measurements of their location relative to the position of the sun at the noon hour.

22 “The results of the first observation showed that we had figured out the distance very accurately, for when the flag was hoisted over the geographical center of the Earth it was located just behind our igloos,” Henson wrote.

23 The party had indeed reached the North Pole. But the question remained who had arrived there first. “I was in the lead that had overshot the mark by a couple of miles,” Henson was quoted in a newspaper article upon their return. “We went back then and I could see that my footprints were the first at the spot.”

24 Upon their return to the United States some reports in the press indicated that there was tension between Peary and Henson as to whom between them deserved credit for reaching the North Pole first. “From the time we knew we were at the Pole, Commander Peary scarcely spoke to me,” Henson would later reveal. “It nearly broke my heart . . . that he would rise in the morning and slip away on the homeward trail without rapping on the ice for me, as was the established custom.”

25 It seems odd that after such a long and successful partnership the two men would become estranged from one another. With a difference of a few hours at most it would be reasonable to give Peary and Henson equal credit for having reached the North Pole together as a team. But the racially divisive climate of time would not give an African-American man the same standing in the

public eye for the accomplishment of such a monumental feat of human achievement. Peary was the recognized discoverer of the Pole while Henson was relegated to the role of trusty companion. Despite Henson's indispensable contributions to their efforts for almost 20 years he received very little acknowledgment.

26 Matters only got worse when even Peary's claim of success was called into question. A member of a previous Greenland expedition, a man by the name of Frederick Cook, professed⁹ to have reached the North Pole one year earlier on April 21, 1908. But the controversy quickly faded when several individuals came forward with compelling evidence to dispute Cook's contrived story of discovery. Unfortunately many doubts were raised to suggest that Peary had also failed to reach the North Pole. Several skeptics speculated that he missed the mark by several hundred miles. With few ways to verify the success of this kind of remote expedition reports of a successful outcome were made on the honor system. Really the only other person to back up Peary's story was Henson, as the four Inuit hunters didn't speak English. Though as a black man his testimony was likely deemed by many to be less than credible, the strength of his character as substantiated by other members of the party carried a great deal of weight in affirming the truth of their journey to the top of the globe.

27 Robert Peary died on February 20, 1920. After returning from his last polar expedition he was promoted to Rear Admiral and traveled the world through his remaining years of life as an acclaimed hero. But history would treat Matthew Henson much differently. Upon his return from the Pole, Henson took a job as a clerk with the federal customs house in New York City, on the recommendation of Theodore Roosevelt. He would spend the next 30 years leading a quiet life in relative seclusion. But in 1937 his contributions to the discovery of the North Pole would finally be recognized. The Explorers Club of New York made him an honorary member. A few years later in 1946 Henson was awarded a medal, identical to the one given to Peary, by the U.S. Navy. And in 1954 he was invited to the White House by President Dwight Eisenhower to receive a special commendation for his early work as an explorer on the behalf of the United States of America.

28 Henson died the following year on March 9, 1955. Though he was buried in Woodlawn cemetery in the Bronx, New York on April 6, 1988, his remains along with his wife's were relocated to Arlington National Cemetery. On the 79th anniversary of his having reached the North Pole Henson was laid to rest with full military honors near the monument to Robert Peary. In 1996 an oceanographic survey ship was commissioned as the

9. **professed** (pruh FEHST) v. claimed.

U.S.N.S Henson in his honor. And in the year 2000 the National Geographic Society presented Henson posthumously¹⁰ its most prestigious award, the Hubbard Medal. Ironically, the first recipient of this prize was Robert Peary in 1906. 🐻

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10. **posthumously** (POS chu muhs lee) *adv.* occurring after death.

Name:	Date:
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COMPREHENSION CHECK

The Legacy of Arctic Explorer Matthew Henson

James Mills

DIRECTIONS: Complete the following items after you finish your first read.

1. Why does Commander Peary hire Henson?

2. Who supports Peary's and Henson's 1906 expedition?

3. When does the group arrive at their starting point at Cape Sheridan?

4. Whose claim calls Peary's claim of success into question?

5. To confirm your understanding, write a summary of "The Legacy of Arctic Explorer Matthew Henson."

Name:

Date:

The Legacy of Arctic Explorer Matthew Henson

James Mills

DIRECTIONS: Respond to these questions. Use textual evidence to support your responses.

1. **Analyze** What made the reaching of the North Pole a different challenge than Henson's earlier expeditions?

2. (a) **Analyze** Why was Henson "the front man" in the field? Use details from the text to support your answer.

3. (a) **Analyze Cause and Effect** What personal and social reasons might have caused Peary to stop communicating with Henson after they reached the North Pole?

4. (a) Name at least two ways in which Henson's contributions to the discovery of the North Pole were acknowledged.

5. **Essential Question: *What drives people to explore?*** What has this selection taught you about exploration?

Understanding Positive and Negative Numbers

- 1 The points on the number line are opposite numbers. The tick marks represent intervals of 1 unit.



Label 0 at the correct spot on the number line.

Label the point plotted to the right of 0.

Label the point plotted to the left of 0.

- 2 Use this list of numbers to answer the following questions:

$0, 4, -2, \frac{2}{3}, -1.8, 16, 3.2, -\frac{5}{4}$

Which numbers are rational numbers that are not integers?

Of the remaining numbers, which are integers but not whole numbers?

Of the remaining numbers, which are whole numbers?

- 3 Use the following terms to complete the following statements: *integers*, *rational numbers*, and *whole numbers*. Use each term only once.

The counting numbers and zero are _____.

The counting numbers and their opposites, along with zero, are _____.

Integers and the decimal equivalents of fractions are _____.

Day 1 cont.
4/6/20 to 4/10/20

Understanding Positive and Negative Numbers *continued*

- 4 Plot and label 4, -3 , 1, and their opposites on the number line.



- 5 If several points are graphed on a number line, is the point that is the farthest from 0 always the greatest? Explain.

Comparing Positive and Negative Numbers

► Write $<$ or $>$ to make each comparison true.

1 $7 \bigcirc 10$

2 $7 \bigcirc -10$

3 $-7 \bigcirc -10$

4 $\frac{2}{3} \bigcirc -1\frac{2}{3}$

5 $-50 \bigcirc 0.3$

6 $-12 \bigcirc -35$

7 $-5 \bigcirc 4.5$

8 $\frac{1}{2} \bigcirc -80$

9 $-\frac{1}{4} \bigcirc -1.4$

► Write each set of numbers in order from least to greatest.

10 $5, -2, -1, 4$

11 $3.4, 7, -3.5, -3$

12 $-2.1, -2, -3, 0$

13 $-\frac{3}{4}, -2, -\frac{1}{4}, 2$

14 $5, 0, -6, -0.1$

15 $7.5, -200, -1.5, -8$

16 $\frac{1}{2}, -\frac{1}{2}, -\frac{1}{3}, \frac{1}{3}$

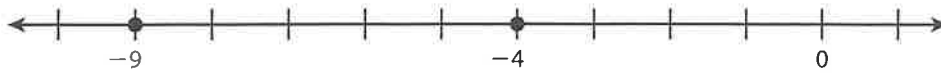
17 $1.2, -2.1, -21, 0.12$

18 $0.1, -0.2, 0.55, -0.31$

- 19 Describe how to determine which of two negative numbers is greater.
Give an example.

Understanding Absolute Value

- 1 Answer the questions about this number line.



Which is greater, -9 or -4 ? Explain.

Which is greater, $|-9|$ or $|-4|$? Explain.

- 2 A football team tries to move the ball forward as many yards as possible on each play, but sometimes they end up behind where they started. The distances, in yards, that a team moves on its first five plays are 2, -1 , 4, 3, and -5 . A positive number indicates moving the ball forward, and a negative number indicates moving the ball backward.

Which number in the list is the greatest?

What is a better question to ask to find out which play went the farthest from where the team started?

The coach considers any play that moves the team more than 4 yards from where they started a "big play." Which play(s) are big plays?

- 3 When does it make sense to compare the absolute values of numbers rather than the numbers themselves?

Understanding the Four-Quadrant Coordinate Plane

- For problems 1–6, plot and label each point in the coordinate plane. Name the quadrant or axis where the point is located.

1 $A(-3, -2)$

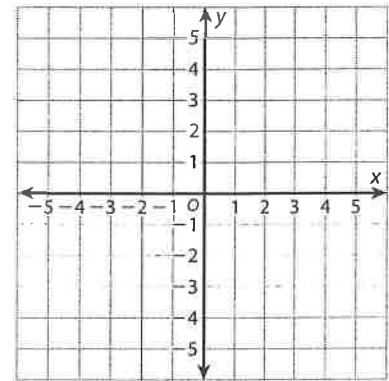
2 $B(4, -4)$

3 $C(2, 3)$

4 $D(-2, 4)$

5 $E(3, -3)$

6 $F(4, 0)$



- 7 If point E above is reflected across the x -axis, what would be the coordinates of the reflection? Explain.
- 8 Imagine that one of the points given in problems 1–6 has been reflected. The reflection is in Quadrant II. What are the possible coordinates of the reflected point? Explain.
- 9 Bradley says that if point B is reflected across the y -axis and its reflection is then reflected across the x -axis, the result is point D . Is Bradley correct? Explain.

Writing and Interpreting Algebraic Expressions

► Write an algebraic expression for each word phrase or situation.

1 12 more than 8.2 times a number n

2 3 less than the quotient of 18 and a number m

3 5.6 times the sum of 4 and a number p

4 the quotient of 2 and a number x , times 3

5 Five friends split the cost of parking at an amusement park. Each of them also buys a \$30 ticket. Write an algebraic expression that represents the amount of money each friend spends. Identify any variables.

6 A movie theater is open x hours Monday through Thursday and y hours Friday through Sunday. Write an algebraic expression that represents the number of hours per week the theater is open.

► Interpret the meaning of the algebraic expression in each problem.

7 Andrew writes the algebraic expression $2s + 2.79$ to represent the cost of his lunch. He bought 2 sandwiches and a large drink. Identify any variables, coefficients, and terms in the expression. Tell what each represents.

Getting to Know: Tides

How do you feel when you see a full moon? Although it happens every month, all year long, people still find the patterns of the moon's movement interesting. However, the moon does more than simply reflect light back to Earth at night. The moon plays an important role in some of the patterns that occur here on our planet, too.

Gravitational attraction holds the moons and planets in their orbits. Although you cannot see the force of gravity that holds the moon in its orbit, you can see the effects of the gravitational attraction between the moon and Earth every day. That is because the tides result from gravitational attraction among the moon, Earth, and Sun. The gravitational pull of the moon is the primary cause of tides on Earth. The Sun also influences tides, but to a lesser extent than the moon does.



A boat rests on a beach during low tide. When high tide occurs, the boat will be floating in the water.

What causes the tides?

Tides are caused when the gravitational attraction of the moon and the Sun cause the sea level to rise in certain areas of Earth's surface. A *tidal bulge* forms as water in the ocean basin sloshes toward the moon's gravitational pull. The water on the opposite side of Earth from the moon also bulges, although to a lesser extent. A high tide forms where the tide bulges toward the moon. At the same time, two low tides occur in the areas that ocean water has flowed away from.

The topography of the shore also affects tides. For instance, the Bay of Fundy, between Maine and Canada, experiences some of the highest and lowest tides in the world. Because of the Bay's unique shape, the tides can cause sea level in the Bay to vary by up to 53 feet!

The moon is much smaller than the Sun. Why does the moon have a greater influence on tides than the Sun does?

Gravitational attraction is the force that keeps your feet solidly planted on Earth. The strength of the gravitational attraction between objects depends on their mass and their distance apart. The Sun is very large and has more mass than Earth, but it is very far away. The moon is smaller than Earth, but it is much closer than the Sun. Therefore, the moon exerts a greater gravitational pull on Earth's surface than the Sun does.



Misconception 1: *Tides only occur on the side of Earth nearest the moon.*

A tidal bulge is similar to a long-period ocean wave that peaks near the side of Earth facing the moon. The opposite side of Earth, however, also experiences a high tide at the same time.

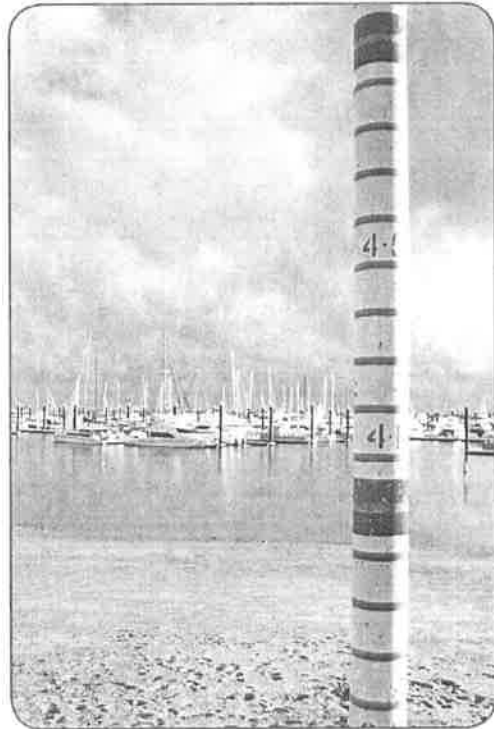
How often do tides occur?

Most places on Earth experience two high tides and two low tides each day. The water level rises and falls at very predictable rates. In fact, tide tables are schedules of tidal variations used by boaters to predict the incoming tide. An area that has a low tide twice daily will find both low tides arriving 50 minutes later during each 24-hour period. High tides also occur 50 minutes later during each 24-hour period.

Are moon phases associated with tides?

The phases of the moon are associated with tidal variation. That is because the position of the Sun, Earth, and moon relative to each other affects the size of tides. *Spring tides* occur as the Earth, Sun, and moon are aligned during the full and new moon phases. Spring tides are higher than normal tides. During a spring tide, the gravitational attraction of the Sun is combined with the gravitational attraction of the moon, causing the tides to be higher and lower than normal.

Neap tides occur when the moon is in the first and third quarter phases. In the first and third quarter, the moon and Sun are in opposition. The gravitational attraction of the Sun counteracts the effects of the moon's gravitational attraction. This causes tidal variation to be less extreme, making neap tides less intense than spring tides.



To help show the height of high and low tides, a *tide gauge* indicates the maximum and minimum water levels.



Misconception 2: Does the rotation of the Sun or moon affect tides?

The rotation of the Sun and moon does not affect the tides. Although the rotation of astronomical bodies is not a factor that influences tidal forces, Earth's rotation does determine where and when a tidal bulge appears. However, Earth's rotation does not affect the strength of the tidal force itself.

Even if you do not visit the seashore often, next time you look up at the moon you might think about it differently. The only natural satellite orbiting Earth, the moon, really does affect the tides and other patterns that occur on our planet.

QUIZIZZ

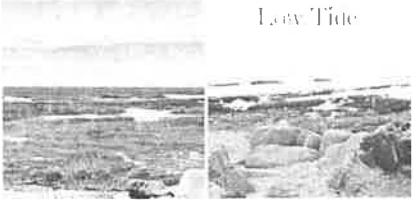
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Tides


15 Questions

1.  **Low Tide** What is a high tide?


- a) Sea pulled TOWARD the moon where Earth is CLOSEST to the moon
- b) Sea pulled AWAY from the moon where Earth is FARTHEST to the moon
- c) Sea pulled AWAY from the moon where Earth is CLOSEST to the moon

2.  Which body has the greater effect on Earth's tides?

- a) Sun
- b) Saturn
- c) Moon
- d) Venus

3.  What type of tide would this arrangement of earth-moon-sun create?

- a) full moon tide
- b) new moon tide
- c) neap tide
- d) spring tide

4.  What type of tides would this arrangement of earth-moon-sun create?

- a) neap tide
- b) spring tide
- c) new moon tide
- d) full moon tide

5. Tides are caused by

- a) strong winds that blow over ocean waters. b) the interaction of Earth, the moon and the sun.
- c) the shifting of the plates on the ocean floor. d) variations in the salinity of ocean water

6. What causes tides?

- a) gravity b) wind
- c) spring d) neap

7. If tides alternate from high to low and there are two of each type of tide a day, about how many hours will generally be between each different tide?

- a) 2 hours b) 6 hours
- c) 12 hours d) 24 hours

8. How many low tides and high tides happen in a day?

- a) 1 low tide, 1 high tide b) 4 low tides, 4 high tides
- c) 3 low tides, 3 high tides d) 2 low tides, 2 high tides

9. You visited the beach at 12 pm (noon) and it is high tide. If you return 6 hours later what tide will you see?

- a) high b) low
- c) none d) spring

10. What do we call the small tides that happen when the sun and moon are at right angles to each other?

- a) Neap Tide b) Spring Tide
- c) Larger Change d) Smaller Change

11. The Moon has a greater influence on Earth tides than the Sun because...

- a) it is smaller than the Sun b) it revolves around the Earth
- c) it is closer to the Earth

12. Differences in the moon's and sun's pull on different sides of the Earth cause _____.

- a) gravity b) lunar phases
- c) tides d) dabbing

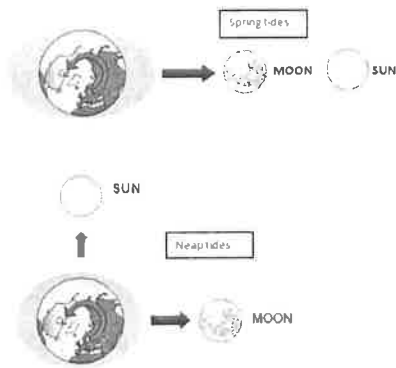
13. The bulge of water on the side of the Earth closest to the moon produces _____.

- a) high tide b) low tide
 c) neap tide d) spring tide

14. A neap tide is a tide with the greatest difference between low and high tides

- a) true b) false

15.



What is a difference between spring and neap tides?

- a) Spring tides occur when the earth and sun are IN LINE with the new or full moon. b) Spring tides occur when moon in 3rd or 1st quarter phases
 c) Spring tides are LOWER than neap tides d) Spring tides occur in Spring and neap tides can occur in any season

- 1 **flood** an overflowing of water in a normally dry area
- 2 **gravity** A force of attraction between objects that is due to their masses.
- 3 **intertidal zone** the narrow band of coastline between the levels of high tide and low tide
- 4 **neap tide** the tide with the least difference between consecutive low and high tides
- 5 **ocean** A large body of salt water
- 6 **ocean current** A large volume of water flowing in a certain direction
- 7 **spring tide** The tide with the greatest difference between consecutive low and high tides
- 8 **tidal pools** pools of water that remain on a coastline after the tide becomes lower
- 9 **tides** the daily rise and fall of Earth's waters on its coastlines